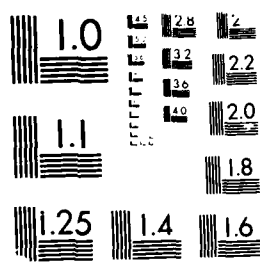


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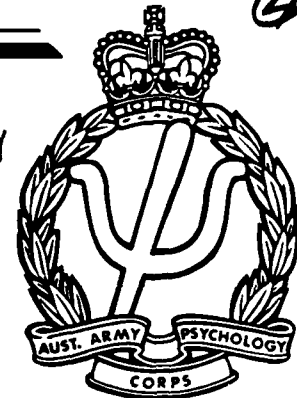
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1986 - 1987

BY

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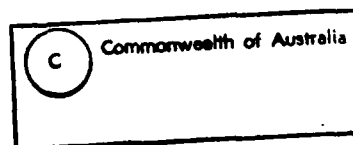
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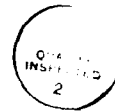
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Technical Note 4/87

CATALOGUE OF AUSTRALIAN ARMY  
PSYCHOLOGY CORPS RESEARCH PROJECTS  
1986 - 1987



by  
Sergeant R.A. Dawson

December 1987

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LTCOL B.J. HODGE  
Commanding Officer  
1st Psychological Research Unit

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## Abstract

This catalogue of research conducted during 1986-87 is produced in accordance with the Operating Handbook for the Australian Army Psychology Corps 2D-3. It consists of all projects which were undertaken within the Corps which progressed to a stage where they were identifiable by a title. The catalogue summarises the returns of research submitted by AA Psych Corps Units/Appointments. Those projects which have been completed and resulted in the production of a report have been distributed on a scale determined by DPSYCH-A. Some reports were commissioned for/by a particular Unit or Appointment and distribution has been limited. Requests for limited distribution reports should be directed to DPSYCH-A.

1. Drake-Brockman, P.N. (1985). Comparison of Unit Workloads (RN 1/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

Previously it has been difficult to make direct comparisons of interviewing workloads in Australian Army Psychology Corps Units. This note develops a methodology for the comparison of workloads in Units which are similarly tasked, and applies this methodology to the 1984 interview figures to reveal considerable differences in interview rates.

2. Reynolds, N.J. (1986). Renorm of Test OHC (RN 2/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

An analysis of OHC scores for apprentice applicants in the years 1984 and 1985 showed a complex relationship between age and OHC score. Previous norms have been presented in three month intervals. Current data do not support this method of presentation. T-tests showed a clear dichotomy between scores of those aged 15.11 and below and those aged 16.0 and above. The former group was homogeneous; the latter group, however, was not. Those applicants in the age group 16.3-16.5 scored no higher than applicants aged below 16 years. The age group 16.0-16.2 scored significantly lower than the age group 16.9 and over. The age group 16.6-16.8 scored between both of these groups, differing significantly from neither. Because the differences did not strongly follow age differences (as evidenced by the 16.3-16.5 age group), the decision was made to treat the age group 16.0 and over as homogeneous for norming purposes. As a result, norms are presented only for two age groups: 15.11 and below and 16.0 and above.

3. Reynolds, N.J. (1986). Renorm of Test B42 (RN 3/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

While previous B42 norms have presented age corrections, an analysis of B42 scores for officer applicants in the years 1984 and 1985 showed no meaningful age differences. Norms are thus presented for the population as a whole, without age corrections.

4. Tomlinson, L.W. (1983). The Behaviour of the ROL in the Male General Enlistment Battery (RN 4/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.



#### Limited Distribution

The behaviour of the R01A, R01B and R01C in the assessment of male general enlistment applicants was analysed. It was concluded that, in 1970, the R01A and R01B were parallel forms but that it was not possible to establish conclusively whether the R01C was also a parallel form of the other two tests. It was established that the R01A and R01B, as administered currently, are different tests from those administered in 1970 and that they are no longer parallel forms, with the R01A being far more difficult than the R01B. With the implementation of the new norms, proportionately more applicants were rejected on literacy. In addition, proportionately more were rejected when the R01A was used to assess literacy standard. Recommendations are made concerning the reintroduction of the use of the dictation element of the R01 to assess literacy, and concerning further research.

5. Drake-Brockman, P.N. (1986). Processing of Army Apprentice Applicants (RN 5/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

This research note looks at the methods of reducing the number of apprentice applicants processed by Recruiting Centres.

It examines whether the quality of apprentice applicant appearing before a selection board would be lowered, if a policy of 'first come-first served' to a preset number, was implemented.

This note concluded that the quality of applicant would likely be lowered, preferring instead reduced apprentice advertising as a more attractive solution.

6. Tonkin J.R.M. (1986). Analysis of SG Ratings (RN 6/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

This paper reports on the analysis of SG ratings for recruits over a ten year period. The SG ratings for all recruits tested at 1RTB from January 1974 to March 1984 were obtained and analysed to determine changes in proportions over time.

Yearly and seasonal fluctuations were investigated to establish the existence of significant trends in the pattern of SG ratings distributions. The effect of raising the selection criteria in terms of SG ratings was also examined to determine the effect on the available applicant pool.

7. Collyer, R.S. (1986). Report on a Survey of Living and Working Conditions of Junior Ranks Posted to the Australian Capital Territory (RN 7/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

The Camp Commandant of Army Office approached the 1st Psychological Research Unit for assistance in obtaining information about living and working conditions for junior ranks (Private to Corporal) posted to the Australian Capital Territory. A survey was conducted, and this Research Note provides a summary of the results.

8. Quinn, K.E. (1986). Discussion of the Dynamics of Mixed Sex Selection Boards (RN 8/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

In 1983, for the first time, female ARA officer training candidates were grouped with male candidates to attempt outdoor tasks as part of the officer selection procedure.

The aim of this paper is to appraise mixed sex candidate groups, by investigating sex role training and expectations.

This paper looks at the salient features of the selection procedure when appraising mixed sex candidate groups, as well as the implications of research findings for the validity and reliability of the selection board procedure.

9. Quinn, K.E. (1986). Integration of Female Army Apprentices (RN 9/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Open Distribution

In 1984 a small group of females started trade training at the Australian Army Apprentices School (AAS), which had up until that time trained only male apprentices. The process of integrating females into previously all male military training institutions, and the experience of being a female in a male dominated work environment, have been extensively researched. Discussions were held with the female apprentices, a small group of male apprentices, staff, and instructors, to determine the relevance of previous research to the AAS situation. Discussion revealed that the sorts of issues which emerged as significant at AAS were very similar to those described in the research literature.

10. Collyer, R.S. (1986). Selection and Initial Employment Training of Operators, Signals (ECN 273) (RR 1/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

Limited Distribution

Whereas in 1966 the OP SIG selection procedures had an 88 to 92 percent success rate in predicting course success, by the early 1980s the course failure rate was approximately 45 percent. This report documents a review of selection and initial employment training conducted to identify the causes and recommend solutions to this problem. Work demands were identified; present selection tests, including morse code aptitude tests, and course results were analysed; operators and failed trainees were interviewed; and trainers and trade managers were consulted. Some specific problem areas have been identified and solutions are recommended.

11. Drake-Brockman, P.N. (1986). Annual Research Report 1985/86 (RR 2/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

Open Distribution

This report is arranged into two main sections, the first of which is a summary of the activities undertaken and completed during the previous calendar year and the second section relates to the ongoing and proposed activities for the current calendar year.

It is prepared as a record of Unit completed and proposed activity and is distributed primarily to inform interested agencies, thereby publicizing research and obviating duplication of effort.

12. Collyer, R.S. (1986). A Comparison of Two Task Rating Scales of Physical Demand (RR 3/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

Open Distribution

Task analysis to specify the physical demands of work is expensive in terms of manpower skills, equipment, and time. Job analysis methods to identify tasks that should be subject to detailed task analysis are an important part of any strategy to specify physical demands criteria for jobs. This paper reports research comparing two sets of task inventory rating scales used to identify important, physically demanding tasks. The physical demand scales are Perceived Physical Effort, which is part of Physical Abilities Analysis, and Physical Strength and Endurance, a scale developed by the US Air Force. Two scales assessing

Consequences of Inadequate Performance were also used. The scales were administered to large samples from two Australian Army employment groups. Scale reliabilities and task rank order intercorrelations are reported and implications for the scales' future use are discussed.

13. Hall, W.H. (1986). Health and Personality Among Army Officers (RR 4/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Open Distribution

This study examines the independent and additive effects of personality hardiness and physical fitness as moderators in the life events stressors-illness relationship among middle-ranking army officers (N=96). Self-report measures of hardiness, life events stressors, psychophysiological response and illness were obtained. A physiological measure of fitness (maximum oxygen uptake) was employed.

The results provide support for claims that personality hardiness and its three components (commitment, challenge and control) buffered against illness, and suggested that officers who were low on both hardiness and fitness were more susceptible to reporting a history of illness than officers high on one or both of the variables. No relationship was found between reports of life events stressors and psychophysiological response. Implications for the Army's system of physical training tests are also discussed.

14. Reynolds, N.J. (1986). The XX Scale (TN 1/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

This note briefly reviews the history of XX scaling within AA Psych Corps. A statistical rationale for the current XX distribution is included.

15. Reynolds, N.J. (1985). A Critique of the 1972 O'Gorman Paper on Selection (TN 2/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

The current paper reviews a paper on Army personnel selection written by O'Gorman (1972). The review centres on methodological criticisms and casts doubt onto the criteria used to assess selection effectiveness. It is argued that generalizations from O'Gorman's findings to today's selection procedures are of little value.

16. Quinn, K.E. (1985). A Visit Report of the 1985 Annual General Meeting of Technical Panel 3 (Manpower) of Sub Group U (Behavioural Sciences) of the Technical Co-operation Programme (TN 3/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

This report summarizes the Annual General Meeting of Technical Panel 3 (Manpower) of Sub Group U (Behavioural Sciences) of the Technical Co-operation Programme (TTCP).

The meeting was held in Edinburgh, UK, between 30 June - 6 July 1985, to review areas of military manpower management.

Topics discussed and conclusions drawn, re-enforced the premise that Australian Military Psychologist participation offers an ideal opportunity to access research resources from overseas in excess of that which is currently offered in Australia.

17. Dawson, R.A. (1986). Catalogue of Australian Army Psychology Corps Research Projects 1982-1985 (TN 4/86). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Open Distribution

This catalogue of research conducted during 1982-85 is produced in accordance with the Operating Handbook for the Australian Army Psychology Corps 2D-3. It consists of all projects which were undertaken within the Corps which progressed to a stage where they were identifiable by a title.

18. Reynolds, N.J. (1987). Renorm of Test AGC (RN 1/87). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

Norms are presented for the AGC based on the 1986 GE applicant population.

19. Martyn, S.A. (1987). Legal Implications of, and Directions in, the Use of Selection Tests - a Literature Review (RN 2/87). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

Selection tests have been and are used widely in many areas of personnel selection, training, promotion etc, by many private and public organizations including AA Psych Corps. Over recent years however, particularly in the US, there have been a number of legal challenges to the use of such tests. Organizations have found that in order to defend themselves against such litigation they must ensure that any tests they use are properly developed, selected and/or validated - usually on the basis of thorough job analyses. Once in court numerous other predictor-related, criterion-related, procedural and data analysis and interpretation issues have also been open to legal challenge and examination. This literature review outlines some of the various issues raised in US litigations and notes associated legal interpretations and decisions. While there have not been any similar challenges yet in Australia, implications of the US experience for AA Psych Corps are discussed.

20. Reynolds, N.J., & Hall, W.H. (1987). Initial Report and First Follow-Up of Soldier Attitude and Opinion Survey (RN 3/87). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

This report presents data from the Soldier Attitude and Opinion Survey (SAOS). The SAOS was developed as an instrument for both ascertaining areas of concern and monitoring changes in attitudes and opinions over time. The survey was administered initially to a 20% sample of soldiers in the Australian Army (not including Officers but including Warrant Officers). Results are presented for this baseline. In addition, data are presented for the first quarterly administration of the SAOS to a 2% sample of the Army soldier population. The analysis emphasizes areas in which the first quarterly administration differs from the baseline levels.

21. Reynolds, N.J. (1987). Analysis of Confidential Report - Soldiers (PR66) (RN 4/87). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit. (To date unprinted).

#### Limited Distribution

This note investigates two years data for the Confidential Report - Soldiers (PR66). Analyses indicate an inflationary trend which could in time reduce the utility of the report. It is recommended that the scales be revised to forestall this eventuality. Scales measuring Physical Fitness and Appearance contribute little to the factor structure of the report and it is recommended that they be dropped. The use of rater tendencies profiles is discussed and it is recommended on

the basis of statistical and practical considerations that they also be dropped. The factor structure of the report is investigated and recommendations are made regarding modification of scale weights in current use.

22. Godwin, J.R. (1987). Leadership in Antarctic Stations (RR 1/87). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Open Distribution

Research Report 1/87 discusses the role of Officers-In-Charge (OICs) at Australia's Antarctic Stations. Using selected approaches from within the field of organizational behaviour, an analysis of the organizational system within which OICs have to operate is provided. Arguments are put forward on whether there is a "best" approach to leadership at an Antarctic Station and what leadership style may have the most to offer.

23. Hodge, B.J. (1987). Research Into Manpower Attrition in the Australian Regular Army (RR 2/87). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

#### Limited Distribution

This paper was prepared for, and presented at, the 23rd International Applied Military Psychology Symposium held in Lisbon, Portugal, between 1 and 5 June 1987.

It includes a brief introduction meant to establish the context of its subject for the international audience of social scientists attending the Symposium.

It was accompanied by illustrative slides which cannot be included in this report.

The paper deals with the relevance of questionnaire measures to job change behaviour following a theoretical model propounded by Stolzenberg and Winkler (1983). Data derived were from survey research into manpower attrition currently being conducted by 1st Psychological Research Unit.

The finding broadly is that questionnaire items indicating dissatisfaction do not discriminate well between those leaving an organisation and those remaining.

24. Dawson, R.A., Andrews, T.S., Francis, K.R., & Thurbon, T.A. (1987). Guidelines for the Written Format of Projects and Reports Produced by Australian Army Psychology Corps Personnel (TN 1/87). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

Limited Distribution

Technical Note 1/87 details the requirements of the Australian Army Psychology Corps for the written format of Research and Technical Notes and Reports.

25. Reynolds, N.J. (1987). GE Selection:  $t = 0.05$  (TN 2/87). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

Limited Distribution

This technical note presents an analysis of the error of measurement on the AGC and a discussion of the implications of this error for GE selection.

26. Collyer, R.S. (1987). Occupational Analysis Bibliography (TN 3/87). Canberra, Australia: Department of Defence (Army Office), 1st Psychological Research Unit.

Open Distribution

This bibliography lists some 350 references pertaining to occupational analysis. Although this is only a relatively small number of those articles published in the field, it does include a large number of references to military research and, in particular, to papers presented at the annual conferences of the Military Testing Association. Use of this bibliography together with those of Morsh (1962) and Cassidy (1983) should provide a good coverage of work in this field.



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